

## § 157.12f

(b) A certificate of type approval must be issued for the specific application for which the oil content meter is approved, that is, for crude oil, “black” products, “white” products, or other products or applications as listed on the certificate.

[USCG–2004–18939, 74 FR 3379, Jan. 16, 2009]

### § 157.12f Workshop functional test requirements.

(a) Each oil content meter and each control section of a monitoring system must be subjected to a functional test on a suitable test bench prior to delivery. The detailed program for a functional test of such equipment must be developed by the manufacturer, taking into account the features and functions of the specific design of equipment. A completed workshop certificate including the delivery test protocol must be received with each unit delivered.

(b) A functional test conducted on an oil content meter must include the following operations:

(1) A check of flow rate, pressure drop, or an equivalent parameter as appropriate;

(2) A check of all alarm functions built into the meter;

(3) A check of all switching functions interconnecting with other parts of the system; and

(4) A check for correct reading at several ppm values on all measurement scales when operated on an oil appropriate for the application of the oil content meter or by an equivalent method.

(c) A functional check conducted on a control section of a monitoring system must include the following operations:

(1) A check of all alarm functions;

(2) A check of the correct function of the signal processor and the recording equipment when simulated input signals of ppm, flow rate, and speed are varied;

(3) A check that the alarm is activated when the input signals are varied to exceed the discharge limits contained in §157.37(a)(3) and (4);

(4) A check that a signal is given to the overboard discharge control when alarm conditions are reached; and

(5) A check that the alarm is activated when each one of the input sig-

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nals is varied to exceed the capacity of the system.

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### § 157.12g Plan approval requirements.

Adequate documentation must be prepared well in advance of the intended installation of a monitoring system and must be submitted to the Marine Safety Center for approval. The following documentation must be submitted:

(a) *A description of the monitoring system.* The description must include a diagram of the pumping and piping arrangements identifying the operational outlets for dirty ballast and oil-contaminated water from the cargo-tank area and compatible with the operational requirements set out in the oil tanker's cargo and ballast handling manuals. Special considerations will be given to installations in oil tankers, which have unusual pumping and piping arrangements.

(b) Equipment manuals, supplied by manufacturers, which must contain details of the major components of the monitoring system.

(c) An operations and technical manual for the complete monitoring system which is proposed to be installed in the oil tanker. This manual must cover the arrangements and operation of the system as a whole and must specifically describe parts of the system, which are not covered by the manufacturer's equipment manuals.

(d) The operations section of the manual must include normal operational procedures and procedures for the discharge of oily water in the event of malfunction of the equipment.

(e) The technical section of the manual must include adequate information (description and diagram of the pumping and piping arrangements of the monitoring system and electrical/electronic wiring diagrams) to enable fault finding and must include instructions for keeping a maintenance record.

(f) A technical installation specification defining, among other things, the location and mounting of components, arrangements for maintaining the integrity of the boundary between safe and hazardous spaces, and the arrangement of the sample piping, including calculation of the sample response